

Eastern Region Energy-Water Summary Overview for Group C

Problems	Needs	Solutions
ENERGY SUPPLY		
Lack of renewable energy applications for electric power generation (wind, low head hydro, small scale biogas)	<p>Incentives - stable tax policy</p> <p>Collect technical cost and performance data</p> <p>Siting for wind in the East (off shore)</p> <p>Biomass</p>	<p>Develop loan guarantee program.</p> <p>Externalities are public benefit, security, reliability</p> <p>Streamline permitting process for wind and RE</p> <p>Grid integration, cost effective platforms</p> <p>Gasification: Reduce production and delivery issues, costs, stability, and controls. Increase variability in feedstocks</p> <p>Liquefaction: Assess evaluation of net energy control of ethanol</p> <p>Long-term research to evaluate limitations on energy crops</p> <p>Develop long-term ecological data</p> <p>Solar water heating technology development to be more economical w/gas & oil price increase</p>
Refining capacity for fuel production	<p>Production tax credits</p> <p>Baseline ecological surveys; include evaluation of environmental impacts</p>	More pipelines with improved capacity
Electric transmission inadequacies	Large scale grid upgrades to improve efficiency	<p>National grid, regional scale</p> <p>Vehicle-to-grid (pilot program)</p>
WATER SUPPLY		
Energy impacts on water quality and environment	<p>MTBE: Improvement in treating perchlorates;</p> <p>Understand biomass uses on water quality. Review unintended consequences</p>	Long-term impact studies
Water infrastructure deterioration	<p>On-line, real time sensors</p> <p>Reduce leaks (to reduce cost of energy to pump)</p>	Expand municipal infrastructure
Surface and ground water quality (acid rain, runoff, discharges)	Understanding of emerging contaminants	Science-based process to evaluate health and safety issues

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Competing demands (energy crops,
domestic use, industry requirements)

Regional data

GIS-based regional analysis of water and energy
issues. Include energy flows, water flows, water
supply data by state that is based on same
standards